REMARKS

The present amendment accompanies a Request for Continued Examination following a final office action dated February 9, 2006. In the final office action, the Examiner rejected claims 1, 16, 27 and 34 under 35 U.S.C. §112, first paragraph, as non-enabled; rejected claims 1-2, 4-6, 13, 16-17, 24, 27-28, 31 and 34-35 under 35 U.S.C. §102(e) as anticipated by Takahashi et al (US 6,424,795); rejected claim 3 under 35 U.S.C. §103(a) as being unpatentable over *Takahashi*; rejected claims 7, 9, 18, 20, 29 and 36-37 under 35 U.S.C. §103(a) as being unpatentable over *Takahashi* in view of Scheurich (US 6,665,453); rejected claims 8, 19 and 30 under 35 U.S.C. §103(a) as being unpatentable over *Takahashi* and *Scheurich*, further in view of Marchese (US 6,891,566); rejected claims 10, 21 and 38 under 35 U.S.C. §103(a) as being unpatentable over *Takahashi* and *Scheurich*, further in view of Belz et al (US 2003/0090572); rejected claims 11, 22 and 39 under 35 U.S.C. §103(a) as being unpatentable over *Takahashi* in view of Makishima et al. (US 6,549,307); and rejected claims 12, 23 and 40 under 35 U.S.C. §103(a) as being unpatentable over *Takahashi* in view of *Marchese*.

Enablement

Independent claims 16, 27 and 34 have been amended to remove the recitations which the Examiner deemed not enabled, and the rejection of these claims on enablement grounds is therefore moot.

Applicant respectfully traverses the Examiner's enablement rejections of claim 1. As explained in response to the previous office action, playing "back" from the buffer simply means that the images are played out of the buffer, with no limitation as to chronological order. Playing "back" therefore includes either playing in forward chronological order or in reverse chronological order (or in some other order). Since the specification clearly discloses that images are played from the buffer, the recited limitation is enabled. The Examiner concedes as much

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when he cites a passage disclosing reverse chronological order. The very passage cited by the Examiner discloses and enables playing "back" from the buffer. The fact that the claim language is sufficiently broad to include other implementations not necessarily disclosed in the specification does not defeat enablement, where at least one implementation which falls within the language of the claim is clearly disclosed.

Prior Art

Applicant has amended independent claims 1, 16, 27 and 34 to more specifically recite the essential features of the present invention. In focusing on certain features which applicant considers significant, applicant has reflected that, in light of the amendments, various limitations previously added to the independent claims are not essential for patentability and may unnecessarily restrict the scope of these claims. Accordingly, applicant has removed certain previously added limitations from independent claims 16, 27 and 34. As amended, the independent claims are allowable.

Applicant will briefly review the intended operation of his invention. Applicant envisions a motion video camera having the capability to save high-resolution still images. In the preferred embodiment, a high resolution form of captured video images is saved temporarily in a circular buffer. These images are being constantly overwritten as new images are acquired, and therefore the life of the high-resolution image in the buffer is relatively brief. During that brief life, the user can decide to save an image that was recently acquired. If the user does not take any action to save an image in the relatively brief time interval, the high-resolution form of the image will automatically be overwritten, and will thereafter be permanently lost (although it may be possible to construct a lower resolution still image from the saved motion video stream).

The advantage of this arrangement is that the user can make a decision to save a high resolution form of the image *after it was acquired*, provided that he acts within the brief interval

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before the image is overwritten. Useful applications of such a device abound. For example, suppose a parent is videotaping his child's soccer match. The child scores the game-winning goal. It would be nice to be able to capture that magic moment in a high-resolution photograph. But using conventional photography, the user must snap the picture at just the right moment (and therefore be extraordinarily lucky) to get that high-resolution image. Using applicant's invention, the user simply saves the contents of the buffer (or some portion thereof) before it can be overwritten. ***The decision to save the buffer contents is made after the fact***, i.e., after the parent knows that the game-winning goal has been scored, and therefore nothing is left to chance.

The one critical feature of applicant's invention is that it enables the user to decide, after the fact, that he wants to save a high-resolution photograph. This capability is not taught or suggested by the prior art.

Takahashi discloses a video recording apparatus having multiple modes of operation and the capability to record either still or motion video. However, the user must place in it a particular mode of operation before capturing the images. If the user selects a high resolution mode of operation suitable for still images, he places the apparatus in the appropriate mode, and the apparatus thereafter records ***everything*** in high-resolution. I.e., everything is saved in high-resolution. The user can, at a subsequent time, select individual images from the saved sequence of high-resolution images for display, saving in another medium, etc. The major drawback to *Takahashi*'s approach is that high-resolution images require massive amounts of storage. If a user is going to place the apparatus in a high-resolution mode, he must either have enormous amounts of storage available for the images, or will be constrained to record for a very brief period of time. Either of these place severe practical constraints on the usefulness of such a device for the typical amateur photographer.

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Scheurich discloses a mixed video/still image apparatus, in which every Nth frame is

buffered at high resolution, and the user can capture a still image by the equivalent of a "shutter"

function, i.e., by a function which captures the nearest current image. *Scheurich*'s device thus

operates just like a conventional camera to capture an image at the time the user gives the

command to do so. The buffer is used to compensate for an internal time lag in processing the

user command. However, there is no disclosed capability in *Scheurich* for the user to decide, after

the fact, to save something which was previously captured in high resolution.

Applicants' claim 1, as amended, recites in part:

1.   An electronic camera apparatus, comprising:
       an electronic optical sensing apparatus...;
       a buffer memory;
       a video storage medium interface for storing video images ... ; and
       a controller which operates said electronic camera apparatus in ... a first mode
wherein said controller concurrently: (a) causes said video storage medium interface to
store motion video ... at a first resolution, and (b) temporarily stores video frames captured
by said optical sensing apparatus in said buffer memory;
       wherein said controller, responsive to a first user command, saves at least one frame
being temporarily stored in said buffer memory in a persistent form at a second resolution
... finer than said first resolution, *said first user command being received after said*
electronic optical sensing apparatus captures said at least one frame being saved; and
       wherein said controller automatically deletes each respective said video frame ...
from said buffer memory without saving the respective said video frame ... if a said first
user command for saving the respective said video frame is not received before a pre-
determined event occurs;
       wherein said controller, responsive to said first user command, saves a user-selectable
portion of the contents of said buffer memory ... ; and
       wherein said user-selectable portion of the contents of said buffer is determined by
playing the contents of said buffer back to the user on a display of said camera, and
receiving a user selection....   [emphasis added]

Takahashi discloses that the user places the apparatus is a mode whereby all frames from

the buffer are saved. This mode command is issued *before* the images are captured. Therefore

the limitation that frames are saved responsive to a first user command "received after said

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electronic optical sensing apparatus captures said at least one frame being saved" is not met.

Furthermore, since all frames from the buffer are saved, the limitation that "said controller

automatically deletes each respective said video frame ... from said buffer memory without saving

the respective said video frame ... if a said first user command for saving the respective said video

frame is not received ..." is not met.

Applicants' claim 16, as amended, recites in part:

16.   A method for operating an electronic camera apparatus, comprising the steps of:
       capturing a sequence of optical images with an electronic optical sensing apparatus;
       storing motion video images from said sequence ... at a first resolution;
       temporarily storing image data from said sequence of optical images in a buffer ...
concurrently with said step of storing motion video images, said image data in said buffer
being continuously overwritten by new image data from said sequence of optical images;
       *making a decision to save at least one recently captured image, said decision being
made by a human user after the at least one recently captured image is captured by said
electronic optical sensing apparatus*; and
       responsive to a command issued by said human user, said command being responsive
to making said decision to save at least one recently captured image, *said command being
issued before said at least one recently captured image is overwritten in said buffer*, saving
at least some images being temporarily stored in said buffer including said at least one
recently captured image in a persistent form at a second resolution, said second resolution
being finer than said first resolution.   [emphasis added]

Independent claims 27 and 34, while not identical in scope, contain limitations similar or

analogous to the italicized language above.

Because *Takahashi* requires that the user decide in advance to save all frames from the

buffer, the step of "making a decision to save at least one recently captured image, said decision

being made by a human user after the at least one recently captured image is captured", is not met.

Moreover, claim 16 requires that the command to save frames be issued "before said at least one

image is overwritten in said buffer" and therefore any user options shown by *Takahashi* which are

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exercised much later with respect to data already saved from the buffer do not meet this limitation.

Furthermore, although language originally inserted to distinguish over *Scheurich* has now been removed from claim 16, the newly added steps adequately distinguish over *Scheurich*. Specifically, *Scheurich* does not teach or suggest a step of "making a decision to save at least one recently captured image, said decision being made by a human user after the at least one recently captured image is captured". *Scheurich* requires a user to contemporaneously decide which images to capture, as in conventional photography. Due to the inherent delay in human reaction time between making a decision to capture an image, and inputting a command to an electronic device, *Scheurich* will necessarily save images which were captured *after* the user made the decision to save the image.

The remaining secondary references are cited to show various aspects of user-selectable parameters or buffering, but likewise fail to teach or suggest, either alone or in combination, the capability of a user to decide, after the fact, to capture and save a high-resolution image.

Applicant has added new independent claim 45. This is an apparatus claim reciting a camera apparatus. It contains limitations analogous to the italicized language above from claim 16, and is patentable over the cited art for essentially the same reasons.

Applicant has further added new dependent claims 41-44 and 46-53. New claims 41, 43 and 53 are similar to original dependent claims 14, 25 and 32. New claims 42, 44 and 47 recite that saving images is a two-step process in which at least part of the buffer is frozen, and an image is then selected from the frozen portion of the buffer, as disclosed in the specification. New claims 46 and 48-52 recite subject matter analogous to that recited in original dependent claims 2, 6-10, 12 and 13. As dependent claims, these newly added claims are allowable for the same

reasons that the respective independent claims from which they depend are allowable. No new
matter is introduced.

In view of the foregoing, applicant submits that the claims are now in condition for
allowance and respectfully requests reconsideration and allowance of all claims. In addition, the
Examiner is encouraged to contact applicant's attorney by telephone if there are outstanding
issues left to be resolved to place this case in condition for allowance.

Respectfully submitted,

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